

Supplementary information

Modulation of *Staphylococcus aureus* spreading by water

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Supplementary Figure S1.

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ATGAATACAT TATTTAACTT ATTTTTTGAT TTTATTACTG GGATTTTAAA 50
M N T L F N L F F D F I T G I L K

      ↓
AAACATTGGT AACATCGCAG CTTATAGTAC TTGTGACTTC ATAATGGATG 100
N I G N I A A Y S T C D F I M D

AAGTTGAAGT ACCAAAAGAA TTAACACAAT TACACGAATA A 141
E V E V P K E L T Q L H E •
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Figure S1. The sequence of *agrD*. Arrow indicates the site of *bursa aurealis* transposon insertion in CGL005. The amino acid sequence is shown under the DNA sequence. The number indicates nucleotide position, starting from the initiation codon of *agrD*. The dot represents termination codon.

Supplementary Video legends

Supplementary Video S1. Brownian movement of *S. aureus* HG001 at 20 min after inoculation. Two microliters of the bacteria was inoculated on 25-ml TSA-0.4 plates. Movement of the bacteria was observed under a phase contrast microscope at a magnification of 400x. This movie shows that bacteria were distributed sparsely within the colony. Many bacteria were found oscillating, typical of Brownian movement.

Supplementary Video S2. Movement of *S. aureus* HG001 at 2.5 h after inoculation.

This movie shows that a few bacterial cells stick on the plate surface; most bacteria were floating and drifting in flowing water toward a general direction.

Supplementary Video S3. Movement of *S. aureus* HG001 at 4 h after inoculation. The movie shows that bacteria in the colony were densely packed and flowing in the same directions.